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IN THE CLAIMS

Please amend claims 15, 16, 42 and 45 as follows:

15. (AMENDED) A golf ball produced by a process for making a golf ball, said process comprising:

forming at least one of a cover and a core component of said golf ball by mixing two or more reactants together to produce a reaction product having (i) a flex modulus of from about 1 to about 310 Kpsi, and (ii) a reaction time of less than 2 minutes, wherein said at least one said cover and said core component formed from said mixing operation has a thickness of at least about 0.01 inches.

16. (AMENDED) A multi-piece golf ball comprising a reaction injection molded material comprising polyurethane/polyurea material, wherein the multi-piece golf ball comprises at least a core and a cover layer over the core.

42. (AMENDED) A golf ball produced by a process for producing a golf ball, said process including a step of (a) reaction injection molding a polyurethane/polyurea material to form at least one of a core layer and a cover layer of the ball, further comprising a step of (b) recycling at least 20% of the polyurethane/polyurea that is produced in connection with step (a) but which is not incorporated into the ball during that step.

45. (AMENDED) A golf ball produced by a process for producing a golf ball, said process comprising: (a) forming a core, (b) covering said core with a covering material to form covered ball, and (c) coating and adding indicia to said covered ball, wherein at least one of steps (a) and (b) comprises reaction injection molding of a polyurethane/polyurea material, further comprising a step (d) recycling at least 20% of the RIM-produced material comprising polyurethane that was produced subsequent to step (a).

REMARKS

Reconsideration of the application and entry of the amendment are respectfully requested. Claims 1 to 48 are currently pending, and claims 15, 16, 42 and 45 have been amended.

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The Final Office Action mailed November 14, 2002 addressed Claims 1 to 48. Claims 1 to 48 were rejected.

Claim 15, 42 and 45 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated that article claims cannot depend from process claims.

Although Applicants respectfully disagree with the Examiner because article claims, such as a golf ball, frequently depend from process claims in issued patents (See for example, claims 3 and 4 of U.S. 6,444,442; claims 5 and 14 of U.S. 6,449,377; claim 8 of U.S. 6,447,859; and claim 10 of U.S. 6,444,146, which were included in the response filed September 12, 2002), claims 15, 42 and 45 have been amended to include the process limitations in each claim. Applicants respectfully submit that this overcomes the rejection of claims 15, 42 and 45 under 35 U.S.C. 112, second paragraph. Applicants therefore respectfully request that the rejection of claims 15, 42, and 45 under 35 U.S.C. 112, second paragraph be reconsidered and withdrawn.

Claim 16 was rejected under 35 U.S.C. 102(b) as being anticipated by Newcomb (US 4,695,055). The Examiner stated that Newcomb discloses a golf ball formed from reaction injection molding, and the ball structure includes a homogeneous translucent plastic and a light stick inserted therein to make the golf ball multiple pieces. The Examiner concluded that column 1, lines 55 to 57 teach a polyurethane material for forming the ball.

Applicants respectfully submit that Newcomb does not anticipate Applicants' claim 16, and Applicants respectfully disagree with the Examiner's characterization of Newcomb. Newcomb discloses a translucent plastic golf ball having a hole through the center of the ball to hold a light stick. Contrary to the Examiner's assertions, Newcomb does not disclose a multi-piece golf ball, as defined by Applicants. The term multi-piece, or multi-layer, is known in the art. Applicants, at page 1, lines 22 to 24, define a multi-piece golf ball as a core of one or more layers and a cover of one or more layers (i.e., at least two pieces, a core and a cover). The light stick that is placed in the center of the ball is not considered one of the pieces or layers, as defined by

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Applicants' specification. Additionally, claim 16 has been amended to explicitly claim that the multi-piece golf ball has at least a core and a cover layer. Newcomb does not disclose a golf ball having at least a core and a cover layer. Furthermore, contrary to the Examiner's assertions, Newcomb does not disclose a golf ball comprising a reaction injection molded material comprising polyurethane/polyurea. Newcomb merely states that the golf ball can be produced by many different methods, such as cast molding, injection molding or reaction injection molding, but Newcomb does not actually teach a golf ball formed by reaction injection molding. Additionally, Newcomb discloses thermoplastic polyurethane materials, not reaction injection molded polyurethane materials. The process and the golf ball of Newcomb are very different from Applicants' invention.

Applicants respectfully submit that for a prior art reference to anticipate, each and every element of the claims must be literally present. Applicants respectfully submit that contrary to the Examiner's assertions, Newcomb does not teach each and every element of Applicants' claim 16.

For at least these reasons, Applicants respectfully submit that claim 16 is not anticipated by Newcomb. Therefore, Applicants respectfully request that the rejection of claim 16 under 35 U.S.C. 102(b) be reconsidered and withdrawn.

Claims 1 to 12, 15 to 17, 20 to 33, 35 to 43 and 45 to 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wu '673 in view of Newcomb. The Examiner stated that Wu discloses polyurethane golf ball parts (core or cover), the polyurethane is a reaction product of a prepolymer and a curing agent, and the prepolymer may include polyester or polyether. The Examiner further stated that the cover composition may further include zinc oxide, zinc sulfite, UV stabilizers, and/or optical brighteners, the golf ball is about 1.68 inches and the cover is dimpled, and the golf ball may be painted (coating) and have nameplating (indicia). The Examiner further stated that Wu does not disclose the polyurethane applied by reaction injection molding (RIM), but Newcomb renders it obvious to mold the polyurethane layers of the primary reference golf ball by a RIM process since such is an obvious expedient for providing the desired resiliency. The Examiner further stated that the particular details

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of claims 4 to 7 are deemed conventional molding techniques that would necessarily be used in such molding processes, and regarding claims 10, 11 and 24 to 29, any other possible distinctions over the modified golf ball have been determined to be obvious lacking a showing of their criticality by a new and unexpected result. The Examiner concluded that it would be obvious to one skilled in the art to form the golf ball of Wu '673 utilizing the RIM molding method detailed by Newcomb and according to the instantly claimed numbers as the applicant has not shown that these particular numbers solve any stated purpose and it appears that the combination of Wu in view of Newcomb would accomplish similar purposes.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Wu discloses a golf ball with a specific type of polyurethane cover made from a polyurethane prepolymer and a slow-reacting polyamine curing agent and/or a difunctional glycol (Abstract and claims). Wu teaches that several curing steps are necessary to cure the cover (column 4, line 50 to column 6, line 68). Wu does not disclose a golf ball component formed by RIM or a process for making a golf ball having the claimed processing parameters.

Applicants' invention is directed to a process for forming a golf ball component comprising the steps of: mixing two or more reactants to produce a reaction product having a flex modulus of from about 1 to about 310 Kpsi and a reaction time of less than two minutes, wherein the component formed by the mixing operation has a thickness of at least about 0.01 inches (claim 1). Applicants' invention is also directed to a multi-piece golf ball comprising a reaction injection molded material comprising polyurethane/polyurea (claim 16), and a golf ball comprising at least one fast-chemical-reaction-produced layer (claim 46).

Applicants respectfully submit that the Examiner has mischaracterized the Newcomb reference, and contrary to the Examiner's assertions, Newcomb does not "detail" a RIM molding method. Newcomb only briefly mentions the RIM process as one of many methods that can be used to mold a golf ball (column 1, lines 36 to 40), and in the case of Newcomb, a translucent plastic, one piece golf ball, and no specific process conditions are given. Newcomb does not disclose the types of urethane, or

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more specifically, a process comprising the step of mixing at least two liquid precursors, nor does Newcomb disclose a multi-piece golf ball comprising a reaction injection molded material comprising polyurethane/polyurea, or a golf ball comprising at least one fast-chemical-reaction-produced layer. Newcomb also does not disclose the claimed process parameters, but instead, only mentions a RIM process. Additionally, as discussed above, Newcomb is directed to a translucent golf ball having a hole in the center to accommodate a light stick, and the golf ball is preferably made from a thermoplastic polyurethane material.

Applicants respectfully submit that the Examiner has shown no motivation, suggestion or teaching for combining Newcomb with Wu. At most, it might have been obvious to try to make a golf ball using a RIM process, but this is not the standard for obviousness. One skilled in the art would not be motivated to make the golf ball of Wu using RIM since the entire focus of Wu is on a particular slow curing, multiple step process for making a thermoset polyurethane cover for a golf ball, and there is no motivation to combine Wu with Newcomb, which is directed to a one piece golf ball preferably made by injection molding a thermoplastic polyurethane. The only possible motivation comes from Applicants' own disclosure.

Applicants respectfully disagree with the Examiner's statement that utilizing the RIM molding method detailed by Newcomb and according to the instantly claimed numbers would be obvious to one skilled in the art. First, as discussed above, Newcomb does not "detail" a RIM process at all. At most, Newcomb lists RIM as one of many types of processes for molding a one piece golf ball, but the remainder of Newcomb focuses on other methods of making a thermoplastic golf ball. Second, Applicants have shown that the RIM process does solve a stated purpose. The RIM process has several benefits not found in conventional molding processes, including, but not limited to: no separate mixer is needed to mix reactants; lower temperatures and pressures are used; the golf ball is more durable; and the RIM process is faster than conventional molding processes (see, for example, specification, page 31, line 15 to page 32, line 26).

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Applicants respectfully submit that there is no teaching from the cited references to use a RIM process as claimed by Applicants to make a golf ball. Instead, the references, either alone or in combination, teach using more conventional methods such as casting or injection molding. Obviousness is tested by what the combined teachings would suggest to one of ordinary skill in the art, and absent some teaching or suggestion to support the combination, it cannot be established by combining prior art references to produce the invention. References can only be combined if there is some motivation or teaching to do so, and Applicants respectfully submit that the only suggestion or motivation for modifying Wu in the manner suggested by the Examiner stems from hindsight knowledge derived from Applicants' disclosure, and the use of hindsight knowledge to support an obviousness rejection is impermissible.

For at least these reasons, Applicants respectfully submit that claims 1 to 12, 15 to 17, 20 to 33, 35 to 43 and 45 to 48 are not obvious under 35 U.S.C. § 103(a) over Wu in view of Newcomb. Applicants therefore respectfully request that the rejection of claims 1 to 12, 15 to 17, 20 to 33, 35 to 43 and 45 to 48 under 35 U.S.C. § 103(a) as obvious over Wu in view of Newcomb be reconsidered and withdrawn.

Claims 13, 14, 18, 19, 41 and 44 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wu '673 in view of Newcomb as applied to claims 1 to 12, 15 to 17, 20 to 33, 35 to 43 and 45 to 48, and further in view of Bayer - RIM Part and Mold design (polyurethanes). The Examiner stated that Bayer teaches the use of glycolysis, a new way to convert polyurethane materials back to their original raw materials, therefore one skilled in the art would have modified the invention of Wu in view of Newcomb by adding recycled material to decrease manufacturing costs.

As previously discussed, Applicants respectfully submit that the Examiner has shown no motivation, suggestion or teaching for combining Newcomb with Wu. At most, it might have been obvious to try to make a golf ball using a RIM process, but obvious to try is not the correct standard for obviousness. One skilled in the art would not be motivated to make the golf ball of Wu using RIM since the entire focus of Wu is on a particular slow curing, multiple step process for making a thermoset polyurethane cover for a golf ball, and there is no motivation, teaching or suggestion to combine Wu

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with Newcomb, which is directed to thermoplastic polyurethane one piece golf balls. The addition of another secondary reference, Bayer - RIM Part and Mold design (polyurethanes), does not remedy this defect.

For at least these reasons, Applicants respectfully submit that claims 13, 14, 18, 19, 41 and 44 are not obvious under 35 U.S.C. § 103(a) over Wu in view of Newcomb and further in view of Bayer - RIM Part and Mold design (polyurethanes). Applicants therefore respectfully request that the rejection of claims 13, 14, 18, 19, 41 and 44 under 35 U.S.C. § 103(a) as obvious over Wu in view of Newcomb and further in view of Bayer - RIM Part and Mold design (polyurethanes) be reconsidered and withdrawn.

Claim 34 was rejected under 35 U.S.C. 103(a) as being unpatentable over Wu '673 in view of Newcomb as applied to claims 1 to 12, 15 to 17, 20 to 33, 35 to 43 and 45 to 48, and further in view of Molitor '751. The Examiner stated that Wu in view of Newcomb does not disclose an ionomer blended with the polyurethane in the cover material, but Molitor teaches a cover made from a urethane and an ionomer, and one skilled in the art would have modified the cover by including an ionomer to improve the durability of the cover.

As previously discussed, Applicants respectfully submit that the Examiner has shown no motivation, suggestion or teaching for combining Newcomb with Wu. At most, it might have been obvious to try to make a golf ball using a RIM process, but obvious to try is not the correct standard for obviousness. One skilled in the art would not be motivated to make the golf ball of Wu using RIM since the entire focus of Wu is on a particular slow curing, multiple step process for making a thermoset polyurethane cover for a golf ball, and there is no motivation, teaching or suggestion to combine Wu with Newcomb, which is directed to thermoplastic polyurethane one piece golf balls. The addition of another secondary reference, Molitor, does not remedy this defect. Additionally, Molitor is directed to a cover composition comprising a thermoplastic urethane and an ionomer. Even if there was motivation to combine Wu and Newcomb, which Applicants submit there is not, the addition of Molitor for a cover formed from a urethane and an ionomer would only provide a thermoplastic urethane and ionomer blend cover, not a cover comprising a reaction injection molded polyurethane.

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For at least these reasons, Applicants respectfully submit that claim 34 is not obvious under 35 U.S.C. § 103(a) over Wu in view of Newcomb and further in view of Molitor '751. Applicants therefore respectfully request that the rejection of claims 13, 14, 18, 19, 41 and 44 under 35 U.S.C. § 103(a) as obvious over Wu in view of Newcomb and further in view of Molitor '751 be reconsidered and withdrawn.

Claims 16 to 21, 23, 25, 29 to 36, 38 to 41, 43, 44 and 48 were provisionally rejected as claiming the same invention as that of claims 14 to 20, 22, 27 to 32, 34 to 41 and 44 of copending Application No. 09/040,798. The Examiner stated that this is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

In the Final Office Action, the Examiner stated that since Applicant "has not addressed the double patenting issues the rejection is maintained." Applicants respectfully submit that the issue was addressed, and since this is only a provisional rejection at this time, Applicants will address the rejection by canceling or amending the claims in the remaining application if necessary.

Claims 1 to 15, 22, 24, 26 to 28, 37, 42 and 45 to 47 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 13, 21, 23 to 26, 33, 42 and 43 of copending Application No. 09/040,798. The Examiner stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the present invention and the '798 application both claim the process of making a golf ball comprising making at least a core and a cover component by mixing two or more reactants. The Examiner further stated that the '798 application produces a product with a flex modulus from 5 to 310 kpsi in a reaction time of 5 minutes or less, and the present invention claims a product with a flex modulus from 1 to 310 kpsi in a reaction time of less than 2 minutes. The Examiner concluded that varying the reaction time of the product is an obvious modification of the '798 application that would promote the desired and/or optimal characteristics of the product.

In the Final Office Action, the Examiner stated that since Applicant "has not addressed the double patenting issues the rejection is maintained." Applicants

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respectfully submit that the issue was addressed, and since this is only a provisional rejection at this time, Applicants will address the rejection by filing a terminal disclaimer in the later issuing application. /

Attached hereto is a marked-up version of the changes made to the application by this Amendment. The Examiner is invited to telephone Applicant's attorney if it is deemed that a telephone conversation will hasten prosecution of the application.

CONCLUSION

Applicants respectfully request reconsideration and allowance of each of the presently rejected claims. Applicants respectfully request allowance of claims 1 to 48, the claims currently pending.

Respectfully submitted,

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